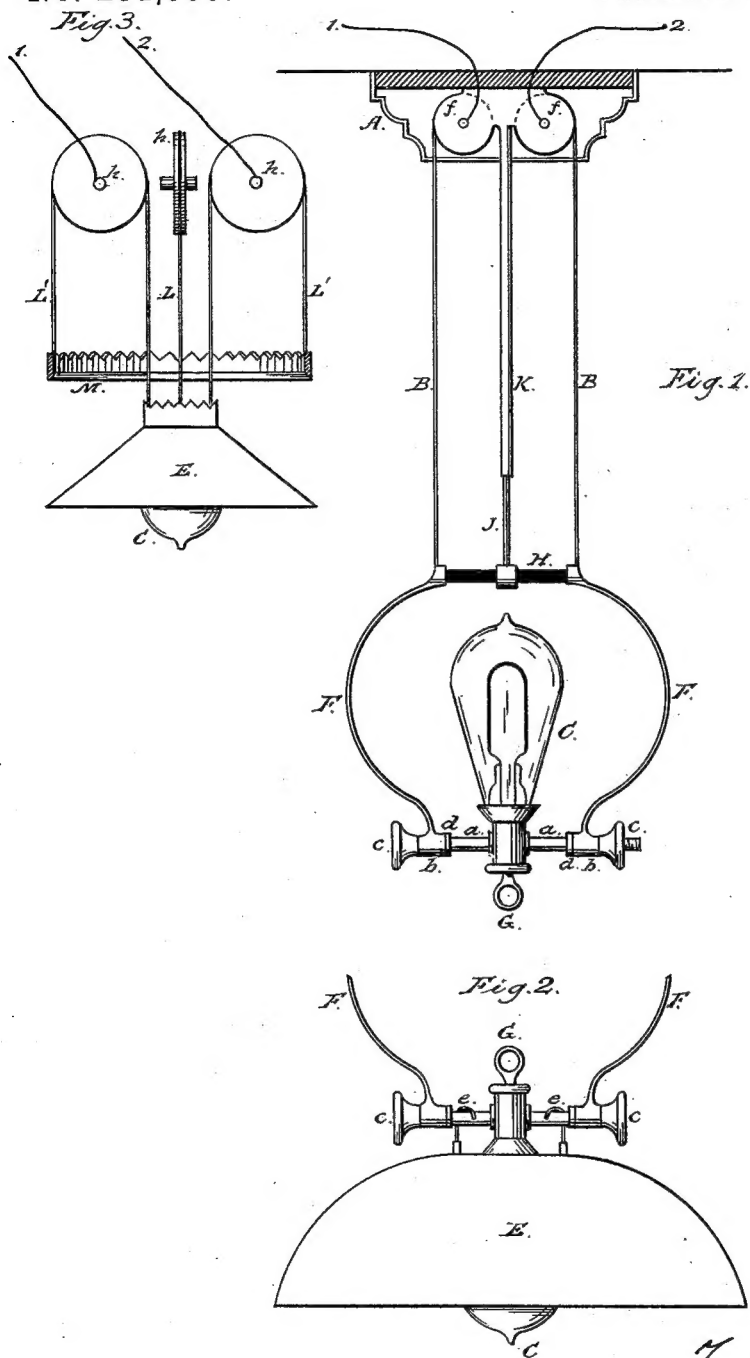


(No Model.)

T. A. EDISON.
ELECTRICAL DROP LIGHT.

No. 251,559.

Patented Dec. 27, 1881.



Attest;
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UNITED STATES PATENT OFFICE.

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ELECTRICAL DROP-LIGHT.

SPECIFICATION forming part of Letters Patent No. 251,559, dated December 27, 1881.

Application filed November 11, 1881. (No model.)

To all whom it may concern:

Be it known that I, THOMAS A. EDISON, of Menlo Park, in the county of Middlesex and State of New Jersey, have invented a new and useful Improvement in Electrical Drop-Lights; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The object of this invention is to construct a chandelier to be used with incandescent electric lamps, so that the lamp may be raised or lowered, and so placed at such a height as may at any time be desired; and, also, that the lamp may either stand upright or hang pendent, as may be most expedient. To accomplish these objects the lamp is held in a suitable frame, consisting of two conducting side pieces and a rod joining them at the bottom, on which the lamp is placed, this rod being capable of turning over in its supports, so that the lamp may be turned upside down. The rod is formed of conducting material, except at its middle, where is an insulating portion, the leading-in wires of the lamp being connected, one to each of the conducting portions of the rod. The frame is suspended by means of metal bands passing over wheels or rollers attached in any suitable way to the ceiling, the conductors which convey the current to the lamp being connected with these bands. The wheels may contain a spring for raising the frame, as is common with window-curtains, or a weight may be used as a counterpoise for raising and lowering the frame and lamp. A rod is also attached to but insulated from the frame, sliding in a hollow tube fastened to the ceiling, in order to assist by its friction in holding the frame at the proper height against the force of gravity.

In the accompanying drawings, Figure 1 is a view of a chandelier or fixture constructed according to my invention. Fig. 2 shows a portion of the same with the lamp inverted, and Fig. 3 a section of a fixture in which a counterpoise-weight is used.

C, Figs. 1 and 2, is an incandescent electric lamp, rigidly secured to and supported upon a rod, which consists of two metal portions, *a a*, the inner ends of which are connected to the leading-in wires of the lamp, the middle of the rod being formed of insulating material. The

rod is supported in metal bearings *b b*, placed between the shoulders *d d* and thumb-screws *e e*.

The ends of the rod are screw-threaded, so that the thumb-screws *e e* may be removed and the rod taken from its supports.

As stated, the rod rotates easily in its bearings, so that the lamp may be inverted, as in Fig. 2, a suitable shade, *E*, then being suspended from the rod by hooks *e e*.

A ring, *G*, is attached below the lamp for drawing down the frame, and may be so arranged that the circuit may be closed or opened and the lamp lighted or extinguished by turning it; or any of the ordinary forms of circuit-controllers described by me in prior applications may be used for this purpose.

The bearings *d d*, in which the rod *a a* turns, are, as seen, the extremities of side pieces, *F F*. They are made to touch the rod on every side, so as to retain contact in whatever position the lamp is placed. The side pieces are of conducting material, and are suspended by metal bands or ribbons *B B*, Fig. 1, which pass to the spring-rollers *f f*, which are of metal, and to which are also connected the conductors *1 2*, the rollers being placed in any suitable box or casing, *A*, attached to the ceiling.

At their upper ends the side pieces, *F F*, are joined by a bar of insulating material, *H*, suspended at its middle by a rod, *J*, which protrudes from the hollow tube *K*, this tube being attached to the ceiling above, and the rod *J* fitting therein so closely as to produce considerable friction.

The lamp and frame are drawn down by means of the ring *G*, the bands *B B* unwinding from within the rollers, and, when desired, may be drawn up by the springs, the friction of the rod *J* within its inclosing-tube *K* helping to sustain them at the proper height.

In Fig. 3 a different arrangement is shown. Instead of using the spring-rollers described, I here make use of sheaves or grooved wheels *h h h*, of conducting material, over which pass metal bands *L L' L''*, one end of each being attached to the lamp *C*, with its shade *E*, while from the other is suspended a band or ring, *M*, of insulating material, and of such weight that it balances the lamp and shade and holds them at the height at which they may be placed. It may be made of such configuration as will make it an ornament to the

fixture. The conductors 1 2 pass to the centers of two of the sheaves, being connected thereto in such way as not to interfere with their turning. The current thus passes to the metal bands L' L'' and by them to the lamp.

It is evident that two or four wheels may be used instead of the three shown.

I do not herein claim, broadly, an electrical chandelier having two sides insulated from each other, and connected each respectively with one terminal of a line-wire and the contact-strip of an incandescent lamp, as such forms the subject-matter of a prior application.

What I claim as my invention is—

1. In a chandelier or bracket for incandescent lamps, the combination, with the two sides insulated from each other, and each connected respectively with one terminal of a line-wire and the contact-strip of an incandescent lamp, of means for varying the position vertically of the lamp within the limit of the length of the sides, substantially as set forth.

2. The combination, with an incandescent lamp, of two supporting sides or strips insulated from each other, and made as conductors, and arranged and constructed to retain the lamp at any desired height within the limit of movement of the sides or strips, substantially as set forth.

3. The combination, with an electric lamp, of metallic bands or cords, insulated from each other, supporting the lamp and acting as conductors thereto, and means acting upon the bands or ribbons to render the position of the lamp vertically adjustable within the limit of the length of the bands or cords, substantially as set forth.

4. The combination, with an electric lamp and metallic conducting-supports therefor, of means, as described, for adjusting the lamp to an upright or a reversed position, or to a position at any angle thereto, substantially as set forth.

5. The combination of an electric lamp, metallic conducting-supports therefor, means, as described, for adjusting and holding the lamp in a reversed position, and a shade provided with means for attachment over the lamp when in reversed position, substantially as set forth.

This specification signed and witnessed this 25th day of October, 1881.

THOMAS A. EDISON.

Witnesses:

WM. H. MEADOWCROFT,
H. W. SEELY.